



May AF 1753

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: )  
Yar-Ming Wang, Hong-Hsiang Kuo, ) Examiner: Edna Wong  
Sheila F. Kia )  
Serial No.: 09/963,625 ) Group Art Unit: 1753  
Filed: September 27, 2001 )  
For: Method of Producing Bright )  
Anodized Finishes for High Magnesium )  
Aluminum Alloys )

APPLICANTS' REPLY BRIEF

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Before the Board of Patent Appeals and Interferences

Dear Sir:

This is in response to the Examiner's Answer mailed January 21, 2004.

The Errors in the Examiner's Answer.

The Examiner's Answer continues to treat the rejected claims 1 and 3-7 as simply reciting anodizing processes for aluminum alloys without regard for the nature of the resulting anodized layer. But each of claims 1 and 3-7 recite specific anodizing conditions for specified magnesium containing aluminum alloys to obtain a clear anodized layer for subsequent coloring. A goal of the claimed methods is to form automotive body panels that can be anodized and then colored to a decorative finish.

In the Examiner's **Response to argument** section is found the following rationale:

“Applicants state that the references applied by the Examiner do not recognize or address the problem of obtaining clear anodized coatings on such magnesium containing alloys.”

“In response, the reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by the Applicants. (citing In re Linter and In re Dillon.)”

The Linter and Dillon analyses are not applicable here because anodizing practices do not inherently produce clear coatings on all alloys. To the contrary, the prior art must teach or suggest how to obtain clear anodized coatings on aluminum alloys containing more than three percent magnesium (claim 1) or about four percent magnesium (claim 5). A combination of patents, with omnibus disclosures of general anodizing practices that do not lead one skilled in the art to the invention recited in the claimed methods, is not a proper or adequate basis for rejection of the claims. The combination of the Korte and Gillich references does not teach the method and result recited in claim 1 or in claim 5. Nor does the combination of Korte, Gillich, Askin et al or Komatsubara et al teach or suggest the claimed methods and anodizing results obtained in any of claims 3 or 4 or 6 or 7.

Applicants’ main arguments for the patentability of the rejected claims are presented in their Appeal Brief. However, the following summaries are restated in response to the Examiner’s Answer.

1. While most aluminum alloys can be anodized the resultant coatings are not necessarily clear for coloring. This fact is disclosed in the subject application and in the Korte, Gillich and Komatsubara et al references.
2. The Komatsubara et al patent discloses that magnesium containing aluminum alloys, like those anodized by the methods of applicants’ claims 1 and 3-7, form black or grey anodized coatings when anodized in 15%

aqueous sulfuric acid electrolyte at 20°C and at a current density of 13.9 A/ft<sup>2</sup>. Komatsubara et al used a general sulfuric acid electrolyte anodizing practice. But their process, which is outside the anodizing limitations of the rejected claims, produced a black anodized layer directly contrary to the result required by the rejected claims.

3. In a further example, Komatsubara et al pre-treated samples of aluminum alloys, containing more than three percent magnesium, in hot phosphoric acid-nitric acid before anodizing in sulfuric acid. After this acid pretreatment (like the Askin et al polishing approach) and sulfuric acid anodizing, Komatsubara et al still got grey or black anodized layers. The combination of Komatsubara et al and Askin et al references does not suggest a method of forming clear anodized coatings on aluminum alloys like those specified in the rejected claims.
4. The Examiner argues that the Komatsubara et al patent was applied in rejection of applicants' claims for reasons other than its anodizing and acid pre-treatment disclosure. But the Komatsubara disclosure, taken as a whole (as it must be taken), is more instructive as to what actually happens in anodizing magnesium containing aluminum alloys with sulfuric acid electrolyte than the disclosures of Korte and Gillich.
5. The Examiner argues that applicants attack the references individually and do not credit them with their combined teachings. Applicants have simply pointed out the full teachings of the individual references, but applicants agree that the full disclosures of the combined prior art should be considered. When the full teaching of the Komatsubara patent is combined with the disclosures of Korte, Gillich and Askin et al, it is clear that the rejections of applicants' claims are without any suitable basis.

The Examiner has applied the combination of Korte and Gillich in rejection of claims 1 and 5 because the combination discloses many different anodizing practices for many families of aluminum alloys. Indeed, the combined disclosure of anodizing possibilities is very broad, like an encyclopedia of all anodizing practices. But the

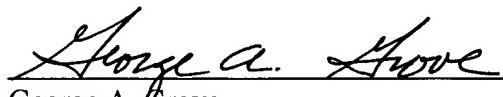
combination of Korte and Gillich does not teach or suggest which practices will produce inherently colored anodized coatings on the specified magnesium containing aluminum alloys.

A person skilled in the art would have to undertake unlimited and undue trial and error experimentation spanning the full combined disclosures of the Examiner's references to discover the successful methods recited in the rejected claims. But the Examiner's references suggest no path to applicants' discovery and provide no assurance of success. The combinations of the four references do not provide a credible and proper basis for concluding that the subject matter of the claimed inventions taken as a whole would have been obvious to one having ordinary skill in the anodizing art.

Accordingly, it is again respectfully requested that the rejection of claims 1 and 3-7 be reversed and these claims allowed and the case passed to issue.

Respectfully submitted,

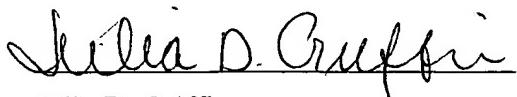
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